

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION

ADDENDUM NO. 1
TO

CLEANUP AND ABATEMENT ORDER NO. 91-45

AN ADDENDUM MODIFYING GROUND-WATER MONITORING
REQUIREMENTS AND WELL DESIGNATION

FOR
PETROLEUM HYDROCARBON CONTAMINATION OF GROUND WATER
IN THE DOWNTOWN SAN DIEGO AREA
SAN DIEGO COUNTY

California Regional Water quality Control Board, San Diego Region
(hereinafter Regional Board) finds that:

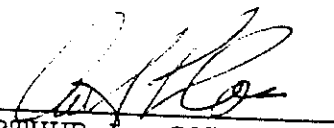
1. On May 13, 1991, the Regional Board Executive Officer issued Cleanup and Abatement Order No. 91-45 to the Redevelopment Agency of the City of San Diego (RACSD); Shell Oil Company and G.T.F. Properties; UNOCAL Corporation and Golden West Hotel; Greyhound Lines, Inc. and Transportation Leasing Company for violation of Section 13304(a) of the California Water Code for discharges of petroleum hydrocarbons to the vadose zone and underlying ground water.
2. By letter dated June 17, 1991, Mr. Anthony D. Daus, Vice President of Geomatrix Consultants, Inc. (consultant for the responsible parties) submitted a request to modify the frequency of ground-water monitoring and to change the target wells to be sampled.
3. By letter dated June 25, CCDC submitted a request for a change in the language of Finding Nos. 4 and 5 to clarify CCDC's position with respect to the responsible parties and the consultant retained by the responsible parties.
4. By letter dated July 2, 1991, Mr. Anthony D. Daus, Vice President of Geomatrix Consultants, Inc. (consultant for the responsible parties) submitted a request to replace site maps depicting the boundary of the free product and dissolved fuel hydrocarbons with graphs depicting hydrocarbon thickness' versus time and dissolved product concentrations versus time (respectively) for selected monitoring wells.
5. After due consideration, Regional Board staff concurs with the proposed changes and modifications to Cleanup and Abatement Order No. 91-45.

Semi-annual monitoring reports shall be submitted to this office in accordance with the following schedule:

<u>Sampling Period</u>	<u>Report Due Date</u>
January - June	July 30
July - December	January 30

Annual monitoring reports shall be submitted to this office by **January 30** of each year.

5. If, through ground-water monitoring, the dissolved phase hydrocarbon is shown to be significantly migrating, then ground-water remediation may become necessary.
6. The dischargers shall dispose of all ground water polluted with petroleum hydrocarbons in accordance with all applicable local, state, or federal laws and regulations.
7. After the dischargers demonstrate to the Regional Board Executive Officer's satisfaction that the technically recoverable free product has been removed, the dischargers shall continue to monitor the ground water and submit semi-annual monitoring reports in accordance with Directive No. 2 of this Order for a period of five years. If at any time during this post-cleanup monitoring the data indicate that the free product has not been mitigated, the discharger shall immediately resume appropriate remedial cleanup actions.
8. Upon adoption of this order, the ground-water remediation directives herein shall supersede the ground-water directives in Cleanup and Abatement Order Nos. 89-48, 89-49, 89-50, and 89-51 and addenda. Other than the ground-water remediation directives, these previously issued orders remain in effect until rescinded by the Regional Board.
9. Any necessary soil remediation shall be in accordance with the directives in each responsible parties respective Cleanup and Abatement Order.

Ordered by: 

ARTHUR L. COE
Executive Officer

Date: MAY 13, 1991

July 26, 1991

IT IS HEREBY ORDERED, that Cleanup and Abatement (C&A) Order No. 91-45 is modified as follows:

1. Finding Nos. 4 and 5 are modified to read:

"4. These sites are within the Marina Redevelopment Project area which is located in the center city area of the City of San Diego. Centre City Development Corporation (CCDC) is a nonprofit corporation established by the City of San Diego to administer the downtown redevelopment program, which includes the Marina Redevelopment Project. CCDC has been selected by the responsible parties to coordinate the cleanup efforts under this order between the responsible parties and the Regional Board."

"5. By letter dated August 20, 1990, CCDC on behalf of, and in coordination with, the named responsible parties, submitted a remedial action plan (RAP), prepared by Geomatrix Consultants, to address the floating (free phase) petroleum hydrocarbon and ground water in the Marina Redevelopment Project area. The RAP indicates the following:

- a. The free product is generally stable and does not appear to be significantly migrating. The dissolved phase plume also has not shown significant migration.
- b. Based on field measurements and ground-water modelling, the free product and dissolved phase plumes do not presently pose a threat to San Diego Bay. Continued ground-water monitoring will help verify the stability of the plumes.
- c. Geomatrix concludes that by reducing the total mass of hydrocarbons in the subsurface, the potential future migration of hydrocarbons will be greatly reduced.
- d. The parties propose to institute a petroleum hydrocarbon (product)-only extraction system which consists of a fixed petroleum hydrocarbon extraction system and a manual, periodic well skimming program. The fixed extraction system will be installed in the wells which have the greatest measured thickness of free product and will continually and automatically extract free product. The periodic well skimming program will include periodic removal of free product in those wells with a free product thickness >0.5 inch.

They also plan to conduct a ground-water monitoring program."

2. Directives 1.b. and 1.c. shall read as follows:

"1.b. On a semi-annual basis, for the first year of implementation, the dischargers shall sample the following ground-water monitoring wells and analyze them using EPA Methods 8015 (modified for gasoline and diesel), and 8020 (aromatic hydrocarbons):

GE-2, GE-3, RMP-2, CC-9, CC-18, CC-19, and any additional well(s) specifically approved by the Regional Board Executive Officer. Total lead (EPA Method 7421) analyses shall only be conducted during the first round sampling event."

"1.c. On an annual basis, following the first year, the dischargers shall sample all wells listed under Directive 1.b., above, and the following ground-water monitoring wells and analyze the samples using EPA Methods 8015 (modified for gasoline and diesel), and 8020 (aromatic hydrocarbons):

BW-13, CC-4, OMW-4, and any additional well(s) specifically approved by the Regional Board Executive Officer."

3. Directive 4.d. shall read as follows:

"4.d. A graph depicting dissolved product concentrations versus time for each monitoring well listed in 1.b. and 1.c."


4. Directive No. 4.e. is added and reads as follows:

"4.e. A graph depicting hydrocarbon thickness versus time for monitoring wells: OMW-1, OMW-15, CC-17, IT-W, GH-7, and BW-19."

5. Directive 4.e. is replaced by 4.f. and reads as follows:

"4.f. Any and all additional monitoring data results generated which are not specifically directed by this Order."

Ordered by:


ARTHUR L. COE
Executive Officer

Date: July 26, 1991